

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-36 (Canceled).

Claim 37 (New): A carbon-containing aluminum nitride sintered body for use at 100°C to 1000°C comprising both of:

carbon whose peak cannot be detected on its X-ray diffraction chart or whose peak is below its detection limit thereon, said carbon being at least one selected from the group consisting of amorphous carbon and carbon forming solid solution in aluminum nitride crystal phase; and

crystalline carbon whose peak can be detected on its X-ray diffraction chart, in a total amount of 200 to 5000 ppm in a matrix of aluminum nitride.

Claim 38 (New): The carbon-containing aluminum nitride sintered body according to claim 37,

wherein said matrix contains a sintering aid comprising at least one selected from the group consisting of an alkali metal oxide, an alkali earth metal oxide, and a rare earth oxide.

Claim 39 (New): The carbon-containing aluminum nitride sintered body according to claim 37,

wherein its brightness defined in JIS Z 8721 is N4 or less.

Claim 40 (New): The carbon-containing aluminum nitride sintered body according to Claim 37, wherein said carbon containing aluminum nitride sintered body is for use at a temperature of 200°C to 1000°C.

Claim 41 (New): The carbon-containing aluminum nitride sintered body according to claim 37,

wherein said carbon-containing aluminum nitride sintered body is provided with a conductor.

Claim 42 (New): The carbon-containing aluminum nitride sintered body according to claim 37,

wherein said carbon-containing aluminum nitride sintered body has a volume resistivity of $10^8 \Omega \cdot \text{cm}$ or more at a temperature of 500°.

Claim 43 (New): A carbon-containing aluminum nitride sintered body comprising 200 to 5000 ppm of carbon whose peak cannot be detected on its X-ray diffraction chart or whose peak is below its detection limit thereon, said carbon being at least one selected from the group consisting of amorphous carbon and carbon forming solid solution in aluminum nitride crystal phase, in a matrix of aluminum nitride.

Claim 44 (New): The carbon-containing aluminum nitride sintered body according to claim 43,

wherein said matrix contains a sintering aid comprising at least one selected from the group consisting of an alkali metal oxide, an alkali earth metal oxide, and a rare earth oxide.

Claim 45 (New): The carbon-containing aluminum nitride sintered body according to claim 43,

wherein its brightness defined in JIS Z 8721 is N4 or less.

Claim 46 (New): The carbon-containing aluminum nitride sintered body according to claim 43,

wherein said carbon-containing aluminum nitride sintered body is for use at a temperature of 200°C to 1000°C.

Claim 47 (New): The carbon-containing aluminum nitride sintered body according to claim 43,

wherein said carbon-containing aluminum nitride sintered body is provided with a conductor.

Claim 48 (New): The carbon-containing aluminum nitride sintered body according to claim 43,

wherein said carbon-containing aluminum nitride sintered body has a volume resistivity of $10^8 \Omega \cdot \text{cm}$ or more at a temperature of 500°C.

Claim 49 (New): The carbon-containing aluminum nitride sintered body according to claim 37, wherein the total amount is 20 to 2000 ppm.

Claim 50 (New): The carbon-containing aluminum nitride sintered body according to claim 43, wherein the total amount is 20 to 2000 ppm.

Claim 51 (New): The carbon-containing aluminum nitride sintered body according to claim 37, wherein the blend ratio of carbon whose peak cannot be detected on its X-ray diffraction chart or whose peak is below its detection limit thereon to crystalline carbon whose peak can be detected on its X-ray diffraction chart is 1/200 to 200/1 (weight ratio).

Claim 52 (New): The carbon-containing aluminum nitride sintered body according to claim 37, wherein the blend ratio of carbon whose peak cannot be detected on its X-ray diffraction chart or whose peak is below its detection limit thereon to crystalline carbon whose peak can be detected on its X-ray diffraction chart is 1/100 to 100/1 (weight ratio).